

An Electrostatically Actuated MEMS Microwave Switch

ABSTRACT OF THE DISCLOSURE

As the basic building block of microwave and millimeter wave units and circuits, the microwave switch must fulfill several requirements including low insertion loss, high isolation and small dimensions. For conventional electrostatically actuated microwave MEMS switches, the isolation between DC and RF is achieved using an RF choke. In this invention, a miniature electrostatically actuated microwave switch with a cantilever and employing two resistive lines on a first substrate and act as the actuation electrodes is provided. The resistive lines as the actuation electrodes according to this invention allows one to minimize the switch dimensions, to facilitate the integration and minimize the interference of the propagating microwave or millimeter wave signals. Another feature of this invention is a miniature electrostatically actuated microwave switch with a cantilever and employing two resistive lines as actuation electrodes on a first substrate, and a third resistive line on a second substrate for the de-actuation of the cantilever.